

# THE LEAD LEADER

Vol. 7, No. 1

*South Carolina...Lead-Safe for Life*

Spring/Summer 2006

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## From the Editor's Pen

As the editor of the "Lead Leader", it is with a tinge of sadness that I pen these lines for what might well be the last issue of this newsletter.

We have been able to put out this publication both in printed form and electronically, on a regular quarterly basis since the summer of 2000. It has been a newsletter for all seasons – spring, summer, fall and winter. The color of the mast head on each issue has changed with the seasons, going from blue, to green, to magenta and then to orange. The now familiar CLPPP mascot – the little lead detective dressed in trench coat and hat, and armed with his magnifying glass, has made his appearance from time to time in the pages of the "Lead Leader"

We are indebted to all those people who made this production possible. My thanks go out to the staff in the Art Department and Print Shop of DHEC, Department of Corrections and our administrative specialists who all helped in the production and distribution of the newsletter. I also wish to take this opportunity to thank the contributors of articles, our readers,

and the CDC without whose support and funding, this would not have been possible. Last but by no means the least, let me pay tribute to the Director of the CLPPP M.L. Tanner, whose idea it was, to start this newsletter in the first place.

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## Upcoming Events

### Trainings offered by National Healthy Homes Training Center and Network

Please visit the following Web sites for more information including a list of upcoming trainings and to register for a course.  
<http://www.healthyhomestraining.org/>  
<http://www.healthyhousing.org/training/>.

**2006 National Environmental Public Health Conference**  
**Advancing Environmental Public Health:**  
**Science, Practice, New Frontiers**

National Center for Environmental Health / Agency for Toxic Substances and Disease Registry  
Centers for Disease Control and Prevention  
For more information, please visit:  
<http://www.cdc.gov/nceh> or  
<http://www.atsdr.cdc.gov>

## Thinking Big: A Holistic View of Housing and Health

By Susan Aceti, Project Coordinator

You've probably been in a home like this. When you walk in, you notice flaking paint, a musty smell and peeling wallpaper. If you just advise the occupants to fix the paint, you may not be fixing the whole problem. A child's exposure to lead may be reduced, yet the ongoing moisture problem may invite pests and mold, which can exacerbate asthma or allergies.

How do you go beyond your area of expertise? Although expertise in a particular area is necessary, so too is taking a broader view of the home and looking at the interdependence of the parts of a whole system. With a big picture view, even those with specialized jobs can help to solve cross-disciplinary problems.

At its best, the holistic effort to create healthier housing protects the health of our children, promotes their growth and development and preserves affordable housing. We can also save billions of dollars in health care costs.

### The National Center for Healthy Housing

The National Center for Healthy Housing (NCHH) recognizes these issues and brings together professionals from three disciplines: affordable housing, the environment and public health. We recognize, too, that a truly holistic view of housing and health goes beyond lead poisoning to other hazards in the home, including allergens and irritants associated with asthma.

NCHH created the National Healthy Homes Training Center and Network to build the capacity of housing and health professionals. The U.S. Centers for Disease Control and Prevention provides primary support for the Training Center along with HUD and EPA.

### Essentials for Healthy Homes Practitioners

The flagship course that we offer is the Essentials for Healthy Homes Practitioners. Everyone from a public health nurse visiting a client to an environmental health professional doing a rodent inspection will gain insight into how housing and health are related and the actions they can take to improve the health of their clients. This two-day course brings together professionals with a variety of perspectives and experiences in a series of exercises — keeping the training lively and engaging.

The training complements hazard-specific training in lead-based paint, radon, mold, pests, and asbestos. It identifies root causes of health problems in a home and links them to seven principles of healthy housing:

- keep it dry;
- keep it clean;
- keep it pest-free;
- keep it ventilated;
- keep it safe,
- avoid contaminants; and
- maintain the house.

*A healthy home is a home designed, constructed, maintained, or rehabilitated in a manner that supports the health of residents. The concept of healthier housing is receiving considerable attention from public health and housing communities. A growing body of evidence links housing conditions to health outcomes such as asthma, lead poisoning, lung cancer, and unintentional injuries.*

*Any home may have health hazards. Yet, there are more than six million substandard housing units nationwide. Addressing the health hazards in these substandard units presents a significant opportunity to improve public health.*

Course participants will also have a better understanding of how to collaborate to make healthy homes a reality in their communities. See <http://www.healthyhomestraining.org/Practitioner/> for more information about the course.

### The Healthy Homes Clearinghouse

The Healthy Homes Clearinghouse is an exciting new addition to NCHH's work. As a "one stop shop" for those interested in healthy homes issues, this online clearinghouse contains over 400 documents. It includes publications from federal agencies, peer-reviewed journals, and other resources. You can search by keyword, title or author or look up all the articles grouped under a particular healthy homes topic. The topics available are those covered in the Essentials for Healthy Homes Practitioners course. Go to <http://www.healthyhousing.org/clearinghouse/index.cfm> to use the Clearinghouse.

### Healthy Homes in Your Community – What You Can Do

If you can travel to one of our courses, sign up now! See <http://www.healthyhomestraining.org/> to register. If travel funds are tight, you can also go online at <http://www.healthyhomestraining.org/Practitioner/Materials.htm> and view all the course materials as well as order a video of the two-day training. Online quizzes can help you test your knowledge. While attending a course gives you the opportunity to interact with other professionals and can provide continuing education hours, going online is a great alternative if you can not attend a course.

You can also visit NCHH's website for information on healthy rebuilding after hurricanes. NCHH has developed a Field Guide for Clean-up of Flooded Homes and you can contact us if you want to order a DVD of the Field Guide download it at: [http://www.centerforhealthyhousing.org/html/healthy\\_rebuilding\\_in\\_new\\_orle.html](http://www.centerforhealthyhousing.org/html/healthy_rebuilding_in_new_orle.html).

If you have any questions about NCHH or our courses, please contact Susan Aceti at 410-772-2780 or [saceti@centerforhealthyhousing.org](mailto:saceti@centerforhealthyhousing.org).

### Upcoming Trainings

The cost of taking the course varies but typically is around \$50. Please visit the following website for a list of upcoming trainings, a typical agenda for the course, and to register for a course. <http://www.healthyhousing.org/training/>.

## EPA 2006 Children's Environmental Health Awards

The U.S. Environmental Protection Agency (EPA) Office of Children's Health Protection and Environmental Education has recognized two DHEC projects with Recognition Awards in their 2006 Children's Environmental Health Awards. As a reflection of dedication and ongoing commitment to protecting children from environmental health risks, the agency has granted permission to the recipients to use the 2006 Children's Environmental Health Award Logo. This is in addition to the award of the recognition certificate.



2006  
Children's Environmental Health  
Recognition Award

## It's Cool to B2@ School!

By Amy Curran, Environmental Educator

It's cool to "be square at school"... breathe better air at school... that is! Student's at current B2@ school campuses would agree. The new B2@ school (Breathe Better Air at School) program's main focus is just that, reducing air pollution around school campuses so everyone can breathe better. Solutions to reduce air pollution are made possible through the efforts of students, faculty, staff, community and local agencies.

The B2@ school has many accomplishments to be proud of its first year in existence, the first one being a big honor, receiving the Children's Environmental Health Recognition Award for 2006! (from the United States Environmental Protection Agency's Office of Children's Health Protection) Research shows that children, especially those with respiratory conditions, are more sensitive to air pollution. A key component of the B2@ school program is policy change within the school. A good example of this is a local school's new policy included in the student/ parent handbook that reads, "We request/advise that any individual in a vehicle that is waiting on a student or adult please turn their



car off if weather is permitting. We hope to reduce respiratory problems for our students, staff and improve the air quality in our environment." The school has "No Idling" signs around the campus which were purchased as a result of winning a \$750.00 "Champions of the Environment" award. The number of visits to the office for asthma incidences has decreased since the implementation of the "No Idling" policy, and the B2@ school coordinator was inducted into the "GreenSteps" Hall of Fame for her commitment to environmental education.

Another accomplishment of the B2@ school program is that it is a component of an EPA Clean School Bus grant awarding the state \$500,000 targeted for reducing air pollution through anti-idling programs, retrofitting old school buses and building new ones. As the B2@ school program expands, we hope to continue reducing air pollution around school campuses and improving children's health in South Carolina.

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## Zooming in on Childhood Lead Poisoning with a new Web-based Tool

By Jared Shoultz, M.A.

Director, Division of Public Health Informatics  
PHSIS, SC DHEC

Ever wish there was a tool you could use to find out where childhood lead poisoning tests were or were not being done or reported? Wish you could find out the aggregated results of those tests and see where the highest numbers of elevated blood levels are in South Carolina without putting in lengthy data requests and running up against HIPPA and other patient confidentiality issues? Even better yet, wouldn't it be great to get all this data in whatever format you wanted

at 9:30pm with no prior notice from the comfort of your own home?

All of those features and many more are now available for anyone who has Internet access and a few minutes to spare. In the recently deployed DHEC CLPPP South Carolina Community Assessment Network (SCAN) module users can analyze the results of the 230,000+ childhood lead poisoning test cases done from

*continued on page 4*



## “Zooming in on Childhood Lead Poisoning with a new Web-based Tool” (Con’t)

1994 to 2004. Those results can be broken down by year, age, race, sex, test type, geographic regions, and blood lead levels in a manner that protects patient confidentiality while still providing useful analysis, visualization, and reporting tools.

Results can be displayed as trend-lines, bar charts, interactive tables or maps and copied into spreadsheets, presentations, or other digital and print media. Users can ask questions like “I wonder what county has the highest number of elevated blood lead levels?” or “What are the specific childhood lead poisoning risks in my community?” or “Where are the majority of the pre-1950 homes in South Carolina?”

Interactive maps let the user overlay 2000 Census block data and aggregated blood lead level test results with facilities such as schools, licensed day cares, and health facilities to compare the relationship between poverty, race, average age of housing to target intervention and educational outreach activities.

Public Health professionals can use this tool to identify hot spots or potentially high-risk areas and potentially focus intervention efforts and limited educational outreach dollars based on actual real-world numbers rather than biased perceptions or faulty logic. These numbers can be analyzed over time and broken down to see certain demographics and geographic regions that seem to be affected more than others.

		Childhood Lead Surveillance					
For South Carolina Residents							
County: All Counties in South Carolina							
Race: Black							
Sex: Male							
Blood Lead Level							
	<u>&gt;= 10 ug/dL</u>		<u>&gt;= 20 ug/dL</u>		<u>All Levels</u>		
Year	Frequency	Percentage By Column	Frequency	Percentage By Column	Frequency	Percentage By Column	
1999	392	23.5	27	17.3	7,229	14.9	
2000	444	26.6	44	28.2	7,878	16.3	
2001	300	18.0	28	17.9	11,232	23.2	
2002	260	15.6	27	17.3	10,903	22.5	
2003	181	10.8	14	9.0	8,935	18.4	
2004	94	5.6	16	10.3	2,294	4.7	
1999-04	1,671	100.0	156	100.0	48,471	100.0	

Small Numbers: Percentages calculated with small numbers are unreliable and should be used cautiously

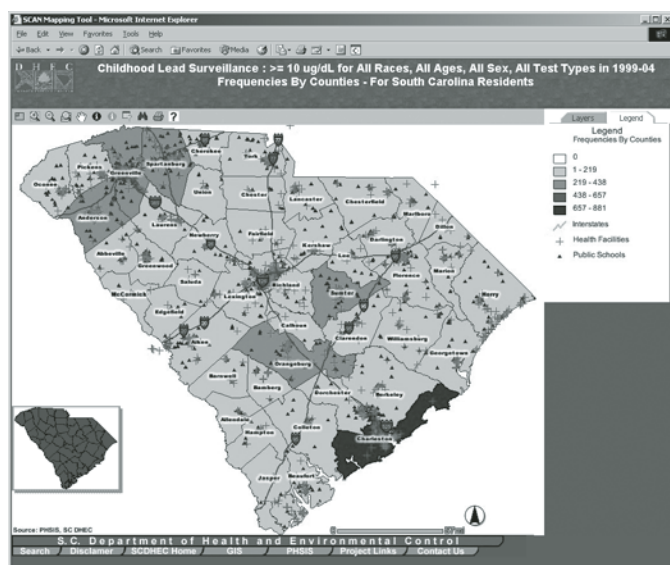
SCAN CLPPP Module Interactive Tables

Trends can be pulled from the test results and displayed graphically assisting both doctors and nurses to understand more about the level of testing done in their community and the risk factors specific to their patients.

Concerned citizens can also query the CLPPP SCAN module to see the numbers of elevated blood levels in their county and determine what risk factors are associated with the particular census block that they live in. While most individuals would have no idea what census block they live in, they do know their address which can be entered into the system and mapped out on-the-fly.

The overall goal of this system was to make data available in trend-line, bar chart, table, and map format to accommodate different ways to analyze public health surveillance data while providing different levels of access for the general public, public health professionals, and CLPPP staff. That goal was accomplished and this SCAN module recently received the EPA Children’s Environmental Health Recognition Award. This system was jointly developed by the CLPPP staff and The Division of Biostatistics and Health GIS which is part of the Public Health Statistics and Information Services within DHEC.

For more information please access the CLPPP SCAN module from the SCAN homepage <http://www.scdhec.gov/scan>. All appropriate contact information and feedback mechanisms are listed on the main and supporting pages.



SCAN CLPPP Module Interactive Mapping



## Environmental club launches several initiatives to make citizens aware of the dangers of lead poisoning.

By Abraham Funchess

*A Proclamation, signed by Mayor Julian Fair of St. Matthews declared March 28, 2006, as Lead Awareness Day at John Ford Middle School in Calhoun County. The proclamation urged citizens to learn more about lead hazards in their homes and community so that children in Calhoun County and across America may grow up free from the threat of childhood lead poisoning.*

### Silver Ribbons

The John Ford Middle School Environmental Science Club (ESC) sponsored several initiatives as part of the school's Lead Awareness Day observance. One of the initiatives was a Silver Ribbon Campaign. The campaign served as a reminder that lead poisoning continues to be a major health issue affecting Calhoun County and other communities nationwide.

As part of the campaign, club members passed out silver ribbons to parents and community stakeholders during a Parent Teacher Student Association (PTSA) meeting. Recipients were encouraged to wear their ribbons and tell others about the harmful effects of lead poisoning.

Inspiration for the campaign came from Child Health Month, sponsored by the American Association of Pediatrics, and National Childhood Lead Poisoning Prevention Week. Below, Kathryn passes out pamphlets and silver ribbons to parents and faculty members during the PTSA meeting.



### Lead Remains a Problem

According to a 1998 Food and Drug Administration (FDA) Consumer magazine article by Dixie Farley, lead was banned from house paint in 1978. U.S. food canners quit using lead solder in 1991. And a 25-year phase out of lead in gasoline reached its goal in 1995.

As a result of such efforts, the number of young children with potentially harmful blood lead levels has dropped 85 percent in the last 20 years, Farley wrote. This has been proven in National Health and Nutrition Examination Surveys conducted by the National Center for Health Statistics.

Similarly, the FDA's 1994-1996 Total Diet Studies showed that since 1984, daily intakes of lead from food dropped 96 percent in 2- to 5-year-olds and nearly 93 percent in adults. Still, in 1997, the FDA approved a new, portable blood lead screening test kit to be used by health professionals, Farley wrote. In the face of so much success, why is another screening tool even necessary? The answer: Lead is still a problem. Children are still being diagnosed with lead poisoning in many areas of the country.

Lead paint is the most common culprit, Farley wrote. Lead paint abounds in older housing. Deteriorating paint exposes youngsters indoors to lead-laden dust and paint chips. Outdoors, children living in or playing around older homes or structures are sometimes exposed to paint residues in soil. Lead particles emitted by past use of leaded gasoline also remain in the soil, especially near major highways. Lead persists at some work sites, and it's occasionally found in water pipes, ceramic ware, and a number of other products.

*continued on page 6*

## Environmental club launches several initiatives to make citizens aware of the dangers of lead poisoning. (Con't)

According to the Centers for Disease Control, the risk of lead exposure remains disproportionately high for children who are poor. Other high risk groups include non-Hispanic blacks, Mexican Americans, people living in large metropolitan areas, and people residing in older homes. (See "Morbidity and Mortality Weekly," Feb. 21, 1997.) Lead poisoning remains the single most preventable disease among children.

### A Local Family's Experience

Two John Ford Middle School students reportedly suffered lead poisoning when they were infants. The children, a brother and a sister, are fraternal twins. They began their lives in a two-bedroom house in the lower part of Calhoun County. The house had been built in the early 1960s. The mother recalls there was flaking paint on the doors, windows and walls.

The mother said her twins were born prematurely. Early on, medical reports indicated that the twins' blood lead levels were very high. The family moved to a new residence. But the mother said the twins were often sick as infants. She said her daughter was slow to develop physically and slower than her son in learning to walk. The mother said that at the time, she thought that her daughter was "just lazy."

In time, blood tests showed that the children were free of lead. Today, fortunately, the twins are in completely normal health and enrolled in the sixth grade at John Ford Middle School. It's unclear how the twins contracted lead poisoning in the first place, but the mother said she wishes she had understood more about the dangers of lead exposure early on.

According to the EPA, a person can get lead poisoning from paint if they:

- put their hand or an object covered with lead dust in their mouth;
- eat paint chips or soil that contains lead; or

*Children who have lead poisoning can suffer from brain damage, decreased I-Q scores, aggression and a loss of hearing. --RNews.*

- breathe in lead dust (especially during renovations that disturb painted surfaces).

### Students Write About Lead

Lead poisoning is not as prevalent in Calhoun County and surrounding areas as it is in larger metropolitan areas. Still, the John Ford Middle School ESC wants Calhoun County to be in the forefront of national initiatives to prevent childhood lead poisoning. As part of Lead Awareness Day activities, students wrote essays on the theme, "A Healthy Family is an Unleaded Family."

"Lead is a poison," a student named Kathryn wrote. "It is very dangerous and is found everywhere. In fact, small children are exposed to lead more than adults are. Lead hides in peeling paint, dirt, dust, pencils, and on your hands and shoes. Just because you don't see it does not mean it is not there."

Another student, Michael, wrote that many people are not educated about lead poisoning. "Lead can kill you or make you sick," he wrote. "There are many ways that lead can get into your body. Some lunch boxes, lipsticks, makeup, paint, and pipe solder may have lead in them." Parents should lead-proof their home for the safety of all members, wrote Justice. "A healthy family stays away from lead sources that may harm the body," she wrote.

### Students Use Skills to Spread the Word

As part of their lead awareness campaign, John Ford Middle School ESC students are also meeting with parents, local business owners and community members. The students

are passing out pamphlets that outline the impact of lead poison. The brochures also offer tips on how to safeguard families from the contaminant.

In addition, sixth grade students are using their technological skills to carry the message to students, faculty and others through PowerPoint presentations on how lead affects people, especially children under the age of 3. Students are even creating a documentary, which highlights the dramatic impact lead can have on health.

The students at John Ford Middle School have found that public awareness of lead and its crippling effects remains poor in their local community. It seems clear that a comprehensive lead awareness plan is still needed to educate citizens and fill gaps in policies and services.

Below, students are shown passing out lead awareness pamphlets at a local supermarket and sharing tips on how to safeguard families from lead.



*Lead paint is the most common culprit, Farley wrote. Lead paint abounds in older housing. Deteriorating paint exposes youngsters indoors to lead-laden dust and paint chips.*

## Childhood lead Poisoning Prevention Program 2000 – 2006: A “look-Back”

*ML Tanner, Director, SC CLPPP*

When I began my job as CLPPP director in December of 1999, I had no idea what to expect, but I did have sense enough to know that I had a lot to learn – about South Carolina, about the Department of Health and Environmental Control, about managing a statewide program, and about much more. I have learned some things, and I am still trying to learn others. What I have managed to learn is due to the patience, guidance, and expertise of many of you. As things change from a CDC funded CLPPP with a full staff to a one-person program, I will have much more to learn. I ask for your patience as this transition occurs.

The CLPPP has had some successes over the past six years – one of them is the newsletter you are reading now. Through our funding from the Centers for Disease Control and Prevention, we have been able to accomplish many things.

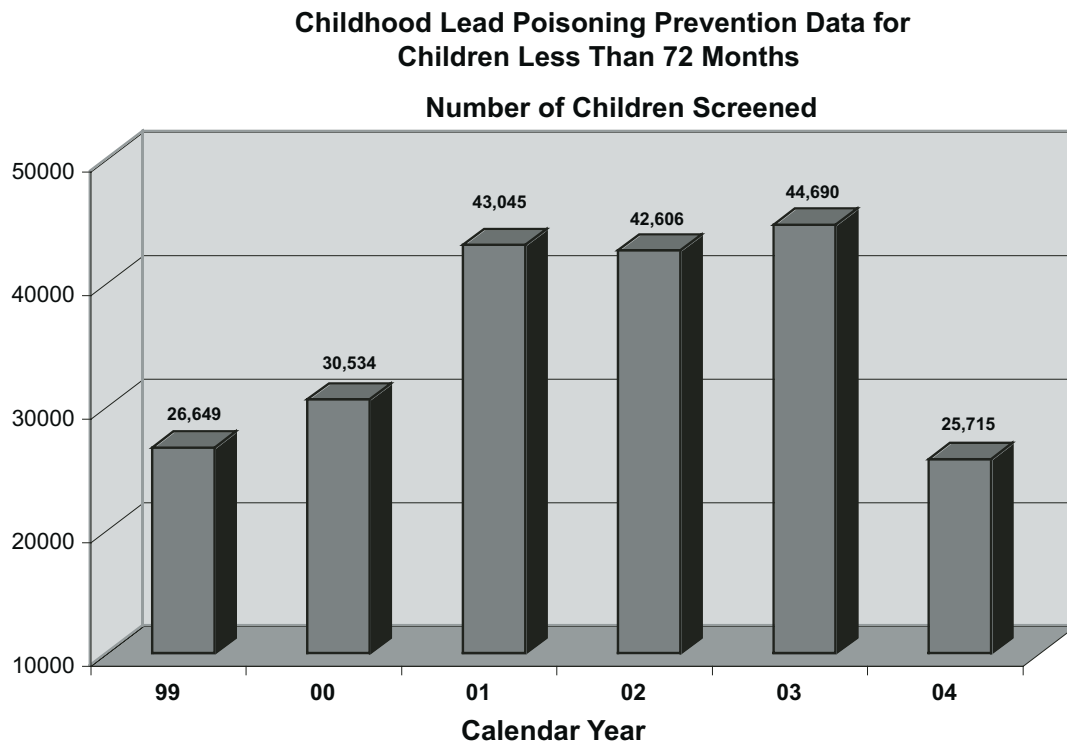
The creation of the “Little Lead Detective” and the accompanying TV spots and educational materials, radio spot on primary prevention, and the toll free number have all allowed us to reach individuals across the state. The Sesame Street® “Lead Away!” video, an interactive “Lead Hurts Kids” board, and other resources have been placed in each regional health office for use by local health department staff and the community.

Three of the biggest accomplishments have been the creation of an active CLPPP Advisory Committee, the publication of a statewide screening plan, and the WIC screening initiative. Under the leadership of Dr. Marion Burton (November 2000 – February 2003) and Dr. James Stallworth (February 2003 – May 2006), our advisory committee has broadened its membership and forged new relationships between members. Our screening plan has

been updated and printed, and is being distributed to providers across the state. If you would like a copy (or multiple copies) of it, please call our toll free number, 866-466-5323, to request one. The WIC screening initiative started in 1999 before I came to South Carolina, and it continued until January 1, 2004. This initiative allowed us to gather important data about where children were being screened, where screening efforts might need to be increased, and what areas might have a lead problem that we had overlooked. This initiative began with a phased approach, and our screening numbers increase gradually the first and second years. As one might expect, the increase in screening brought with it an increase in the number of children identified as having an elevated blood lead level. Notably, in 2003, more children than ever were screened, but we had a drop in the number of cases of childhood lead poisoning. The following two tables show the success of this initiative, as well as the drop in screening that occurred after screening in WIC clinics was discontinued.

Using the data gained from this initiative, the CLPPP worked with the Division of Biostatistics to develop the CLPPP SCAN module. Screening and case data were mapped and can be accessed through <http://scangis.dhec.sc.gov/scan/>. There is a public version, as well as a password-protected version. The process uses a stepwise approach and users may create tables, bar charts, and graphs. Even though we are no longer screening children who access health department services through WIC, the module we created will allow private providers and others to learn about their areas. As the CLPPP collects more screening data, it can be added to the module. This module recently was honored with a Children’s Environmental Health Recognition Award from the U. S. Environmental Protection Agency’s Office of Children’s Health Protection and Environmental Education. Please read the article by Jared Shoultz in this newsletter to learn more about that award.





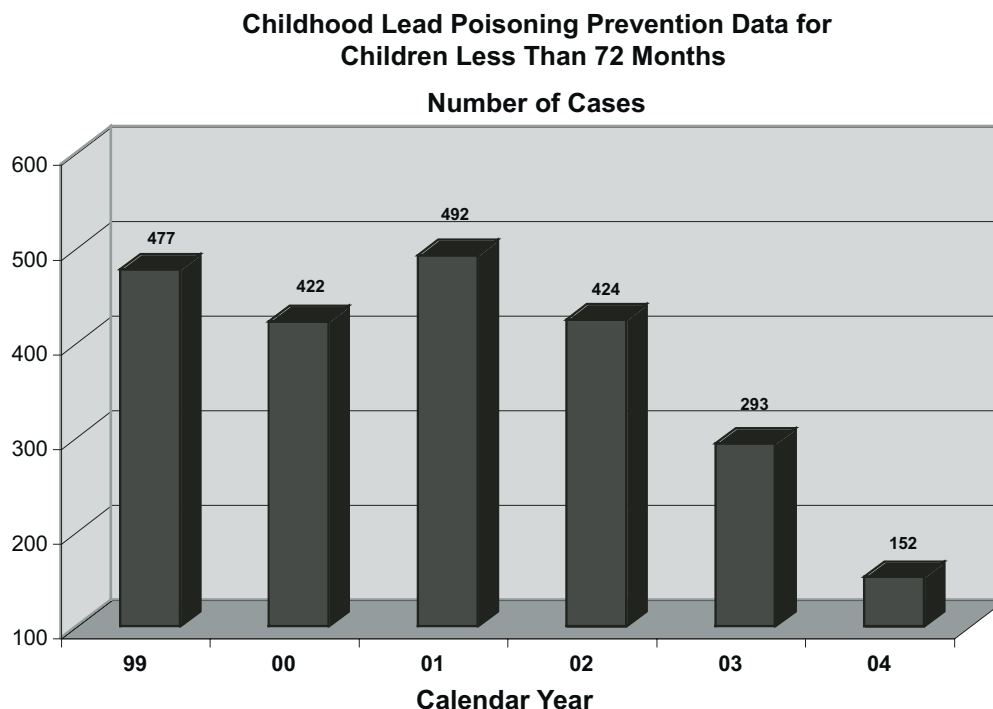
These data were obtained from the SC Department of Health and Environmental Control Laboratory and Private Providers.

What are the next steps, now that the CLPPP's funding from CDC is coming to an end? We will still have a lead program and will continue to conduct surveillance activities and provide technical assistance, per legislative mandate. We will still provide educational materials and presentations, as we are able. Efforts have already begun to identify other children's environmental health issues of interest to our stakeholders. The Division of Women and Children's Services is already addressing some children's environmental health issues in presentations and partnerships. It is my hope that in the future, we will have a

children's environmental health program to address childhood lead poisoning as one of a number of issues. Our children are our future and we owe them our best efforts.

If you will indulge me in a personal message: Janice, Lakshman, Kathy, Sarah, Mike, and David – I would have been lost without you the past six years. Thank you for being there.

Childhood Lead Poisoning Prevention Program 2000 - 2006.  
A "Look Back" (Con't)



Number of cases are children with confirmed blood lead levels of 10 µg/dl or greater. These data were obtained from the S.C. Department of Health and Environmental Control Laboratory and Private Providers.

**Chair of the S.C. State Lead Advisory Committee writes....**

*James Stallworth, M.D.*

The state of South Carolina has worked diligently in attempting to identify children at risk for lead poisoning and help providers institute appropriate treatment strategies for children with plumbism. Although change is inevitable, protecting our children from environmental toxins will remain a constant. The Lead Leader newsletter serves as an example of "change" as this is its last issue.

I am reminded of the Lead Leader's importance in communicating concerns and updates about lead exposure in South Carolina. As the chair of the Advisory Committee to CLPPP, the Lead Leader has

been a valuable resource in keeping its readers abreast of new and current developments in childhood lead poisoning and prevention. Additionally, it has served as the main communication arm of CLPPP.

I am saddened to see the Lead Leader come to an end. But its legacy in informational journalism will not be forgotten by health care providers of children.

## Lead Star Awards

At the 2006 National Indoor Environmental Health and Technologies, and National Lead and Healthy Homes Conference concluded in Charleston on March 31, Liz Colon of the Childhood Lead Action Project (CLAP) of Rhode Island received a Lead Star Award for their extensive work with the RI lead lawsuit victory; Kristin Joyner, received a Lifetime Achievement Award for her dedication over the past 14 years working with the North Carolina based United parents Against Lead (UPAL); Leann Howell received a Lead Star Award for her work with parents and founding the American Lead Poisoning Help Association (ALPHA).

Kris has been a contributor to The Lead Leader newsletter and long time friend of the SC CLPPP.



*Photo courtesy of Leann Howell*

## National Library of Medicine Resource Update

A new Web page that addresses the relationship between lead and human health has been added to the National Library of Medicine's (NLM) Enviro-Health Links. This page provides links to selected Web sites on exposure, treatment, and prevention of lead poisoning. <http://sis.nlm.nih.gov/enviro/lead.html>

Lead is a naturally-occurring element that can be harmful to humans when ingested or inhaled. Lead poisoning can cause a number of adverse human health effects, but is particularly detrimental to the neurological development of children. People can be exposed to lead through the air, as well as through accidentally or intentionally eating soil or paint chips, and food or water contaminated with lead.

**NLM also offers other Enviro-Health Links on topics such as:**

**Children's Environmental Health**

<http://phpartners.org/cehir/sampler.html>

**Indoor Air Pollution**

<http://sis.nlm.nih.gov/enviro/indoorairpollution.html>

**Outdoor Air Pollution**

<http://sis.nlm.nih.gov/enviro/outdoorairpollution.html>

**Arsenic**

<http://sis.nlm.nih.gov/enviro/arsenicandhumanhealth.html>

**NLM Enviro-Health Links**

<http://sis.nlm.nih.gov/enviro/envirohealthlinks.html>



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This newsletter is published by the SC Childhood Lead Poisoning Prevention Program and is made possible by grant number US7/CCU422839-03 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC.

## South Carolina... Lead-Safe for Life



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We gratefully acknowledge the support of the staff of the Art/  
Graphics Department and DHEC's Copy Center in  
the production of this newsletter.